## STATEMENT OF THE CLAIMS

1. **(Previously presented)** A chemical vapor deposition (CVD) device comprising

a deposition reaction chamber;

a plasma discharge chamber that is provided remotely from the reaction chamber; wherein the plasma discharge chamber comprises 1) a wall that comprises an aluminum alloy, wherein the wall is exposed to plasma discharge, and 2) a radio-frequency (RF) energy source connected to plasma discharge chamber electrodes;

a source of a cleaning gas, wherein the source of the cleaning gas is connected to the plasma discharge chamber;

a piping that links the reaction chamber and the remote plasma discharge chamber; and

a valve positioned in the piping, wherein the valve has an opening that, when fully open, defines a pressure drop across the valve of less than about 0.25 Torr,

wherein energy coupled to the remote plasma discharge chamber activates cleaning gas within the plasma discharge chamber, and the activated cleaning gas is exposed to the aluminum alloy wall and brought into the inside of the reaction chamber through the piping and changes solid substances adhered to the inside of the reaction chamber as a consequence of film formation, to gaseous substances, thereby cleaning the inside of the reaction chamber.

2. **(Original)** The CVD device according to Claim 1, wherein the activated cleaning gas comprises fluorine active species.

3. **(Previously presented)** The CVD device of Claim 2, wherein the internal surface of the piping comprises a metal not corroded by the activated cleaning gas species, wherein said metal is selected from the group consisting of: aluminum and aluminum alloy.

4. **(Cancelled)**.

5. **(Previously presented)** The CVD device of Claim 1, wherein the piping and the valve are configured so that no appreciable pressure loss arises in the piping and at the valve when the cleaning gas flows between the remote plasma discharge chamber and the reaction chamber.

6. (**Original**) The CVD device of Claim 5, wherein the activated cleaning gas comprises fluorine active species and an inner surface of the valve is made of fluorine-passivated aluminum.

7. (**Cancelled**).

8. **(Previously presented)** The CVD device of Claim 1, wherein the pressure drop across the valve when fully open is less than about 0.1 Torr.

9. **(Previously presented)** A chemical vapor deposition (CVD) device comprising:

a deposition reaction chamber;

a plasma discharge chamber that is provided remotely from the reaction chamber; wherein the plasma discharge chamber comprises 1) a wall that comprises an aluminum alloy, wherein the wall is exposed to plasma discharge, and 2) a radio-frequency (RF) energy source connected to plasma discharge chamber electrodes;

a source of a cleaning gas, wherein the source of the cleaning gas is connected to the plasma discharge chamber;

a piping that links the reaction chamber and the remote plasma discharge chamber; and

a valve positioned in the piping, wherein an opening of the valve is sized, when fully opened, substantially equal in width to an inner surface of the piping, and the valve does not have projections, when fully opened, with respect to the inner surface of the piping,

wherein energy coupled to the remote plasma discharge chamber activates cleaning gas within the plasma discharge chamber, and the activated cleaning gas is exposed to the aluminum alloy wall and brought into the inside of the reaction chamber through the piping and changes solid substances adhered to the inside of the reaction chamber as a consequence of film formation, to gaseous substances, thereby cleaning the inside of the reaction chamber.

10. **(Previously presented)** The CVD device of Claim 1, wherein the piping and the valve are heated to a temperature effective to prevent deposition of the cleaning gas.

11. (**Withdrawn**) The CVD of Claim 1, further comprising a support provided within the reaction chamber, configured to support an object to be processed, and a gas-emitting plate provided at a position facing the support within the reaction chamber in order to supply reaction gas to the object to be processed to form a film on the object to be processed, wherein the activated cleaning gas is supplied through piping into the reaction chamber from holes provided on the gas-emitting plate.

12. (**Withdrawn**) The CVD device of Claim 11, wherein the gas-emitting plate is connected to a source of power to form an *in situ* plasma electrode for plasma CVD within the reaction chamber.

13. (**Withdrawn**) The CVD device of Claim 11, further comprising a gas conduit communicating with a source of reaction gas, wherein one end of the gas conduit is linked to the piping at a predetermined position between the valve and the gas-emitting plate.

14. (**Original**) The CVD device of Claim 1, wherein the piping is straight between the remote plasma discharge chamber and the reaction chamber.

15. (**Previously presented**) The CVD device of Claim 1, wherein the energy activating the cleaning gas has a frequency between about 300 kHz and 500 kHz.

16. (**Original**) The CVD device of Claim 14, wherein the energy activating the cleaning gas has a power between about 1,500 W and 3,000 W.

17. (**Original**) The CVD device of Claim 1, further comprising a reaction gas inlet and a reaction gas outlet defining a horizontal flow across a substrate surface upon which material is deposited within the reaction chamber.

18. (**Original**) The CVD device of Claim 17, wherein the piping opens into the reaction chamber downstream of the inlet and upstream of a substrate support configured for supporting a substrate within the chamber.

19. (**Previously presented**) The CVD device of Claim 14, wherein when the valve is open, a cleaning gas can flow from the remote plasma discharge chamber to the reaction chamber without obstruction, and wherein the piping is at least 1/2 inch in diameter.

20-44. (**Cancelled**).

45. (**Previously presented**) The CVD device of Claim 1, wherein the wall made of aluminum alloy of the remote plasma discharge chamber comprises anodized aluminum alloy.